

# Work Order ID 52681

October 7, 2009 10:18:28 AM



Page 1

Item ID: D412-666-011

Accept



Setup Start



Revision ID: C1

Stop



Item Name: Gross Weight Towing

Start Date: 10/07/09 Start Qty: 2.00



Cust Item ID:

Required Date: 10/07/09 Req'd Qty: 2.00



Customer:

Reference:

Approvals: Process Plan: *W*

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

IIN D412-666

Rev C1

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP412-666-011

CHG 004

*Scrl 10/07*

110

Pick Kit

0.00



Packaging

Memo

0.00

Packaging

*uno 09110107*

*(12)*

120

QC4- 100% Inspect kits for completeness

0.00



QC

Memo

0.00

Quality Control

*2) Scrl 10/07*

*(12)*

*/*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 52681

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Item ID: D412-666-011

Accept



Setup Start



Revision ID: C1

Stop



Item Name: Gross Weight Towing

Start Date: 10/07/09 Start Qty: 2.00



Cust Item ID:

Required Date: 10/07/09 Req'd Qty: 2.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

130

0.00



Packaging

Packaging

Memo

0.00

Identify and pack for shipping as per PPP D412-666-011 Location: \_\_\_\_\_ : PPP Rev: \_\_\_\_\_

E

140

0.00



QC

QC21- Final Inspection - Work Order Release

Memo

0.00

Quality Control

9/10/7 @ 2x SL

09/10/07

ME

09-10-07

169

109

AD

34

H

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

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Page 1

Work Order ID: 52681

Parent Item: D412-666-011RevC1

Parent Item Name: Gross Weight Towing

Comments:

Start Date: 10/07/09

Required Date: 10/07/09

Start Qty: 2.00

Required Qty: 2.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

AN6-15A *84* Purchased No



Bolt

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

80

108744

12

111424

18

111425

50

Each

24.0000

8.0000



*8 x 111424 mo 09/10/07*

AN6-45A *4* Purchased No



Bolt

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

24

110002

1

111425

23

Each

926.0000

16.0000



*8 x 111425 mo 09/10/07*

AN960JD616 *88* Purchased No



Washer

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST

926

112314

426

112828

500

*16 x 112314 mo 09/10/07*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

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150  
01W  
10  
Page 2

Work Order ID: 52681

Parent Item: D412-666-011RevC1

Parent Item Name: Gross Weight Towing

Comments:

Start Date: 10/07/09

Required Date: 10/07/09

Start Qty: 2.00

Required Qty: 2.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2888RevA2		Manufactured	No				Each	12.0000	4.0000			



SL  
Lug

Warehouse  
Location

Loc Qty

Loc Code

Main Warehouse

ST

12

47335

12

4x 47335 mo 09/10/07 100

MS21042L6

x 4

Purchased

No

Each

665.0000

8.0000



SL  
Nut

Warehouse  
Location

Loc Qty

Loc Code

Main Warehouse

ST

665

105077

22

110002

5

111548

38

111578

400

112492

200

8x 111548 mo 09/10/07

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Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



### 1.0 APPLICABILITY:

GROSS WEIGHT TOWING KIT D412-666-011 MAY BE INSTALLED ON DART D205-634-XXX OR D204-635-XXX OR D412-742-XXX SKIDTUBES INSTALLED ON 412 AIRCRAFT TO ALLOW GROUND HANDLING AT GROSS WEIGHT IN ACCORDANCE WITH BELL SERVICE INSTRUCTION BHT-412-SI-58. IT IS ALSO ACCEPTABLE TO INSTALL THIS KIT ON 204/205/210/212 AIRCRAFT EQUIPPED WITH DART SKIDTUBES IN ORDER TO PRESERVE THE LIFE OF THE AFT CROSSTUBES. THIS KIT CONTAINS ENOUGH PARTS TO INSTALL D2888 LUGS ON BOTH SKIDTUBES.

### 2.0 PARTS LIST:

QTY -011	PART	DESCRIPTION
X	D412-666-011	GROSS WEIGHT TOWING KIT
2	D2888	LUG
4	AN6-15A	BOLT
4	AN6-45A	BOLT
8	AN960JD616	WASHER
4	MS21042L6	NUT (or MS21042-6)



REFERENCE ONLY

### 3.0 WEIGHT AND BALANCE:

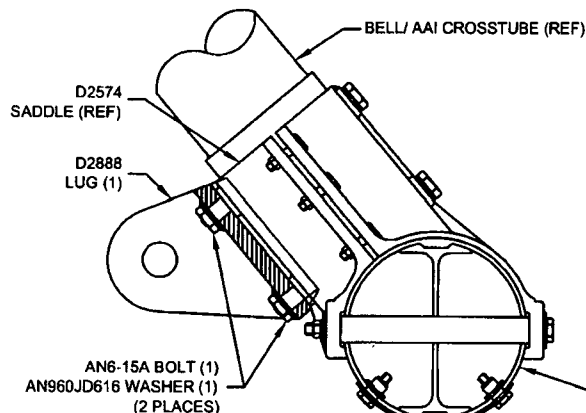
INSTALLATION	WEIGHT	LONGITUDINAL	
		ARM	MOMENT
D412-666-011	1.90 lb 0.86 kg	163.0 in 4.14 m	310 in lb 3.56 m kg

### 4.0 PROCEDURE:

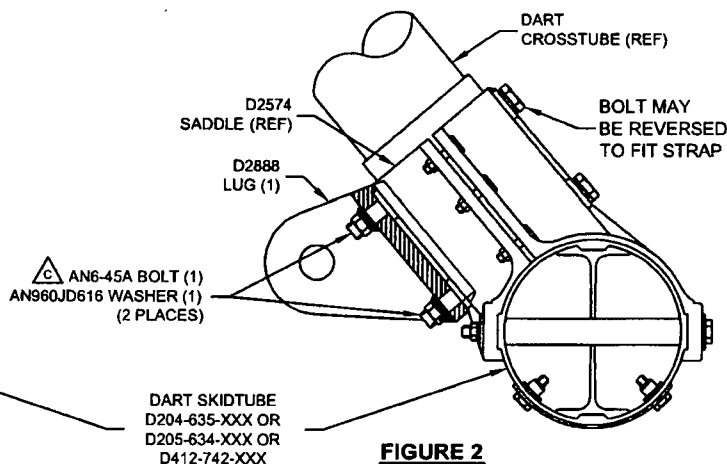
- 1) REMOVE AN6-12A BOLTS (4) ON INBOARD SIDE OF AFT SADDLE AND DISCARD. ON LANDING GEAR WITH DART AFT CROSSTUBES, REMOVE (4) AN6-40A BOLTS.
- 2) INSTALL D2888 LUGS WITH AN6-15A BOLTS (2) AS SHOWN IN FIGURE 1. USE AN6-45A (2) BOLTS ON DART CROSSTUBES, AS SHOWN IN FIGURE 2.
- 3) TORQUE BOLTS TO 95-110 in-lb (10.7-12.4 N-m).

### 5.0 NOTE:

IT IS ACCEPTABLE TO REPLACE THE AN6-15A/45A BOLTS WITH LONGER OR SHORTER AN6 BOLTS AS REQUIRED AND/OR INSTALL EXTRA AN960JD616 WASHERS UNDER NUT TO ENSURE 1.5 TO 4 THREADS IN SAFETY.



**FIGURE 1**  
(BELL/AAI CROSSTUBES)



**FIGURE 2**  
(DART CROSSTUBES)

C	- AN6-45A WAS AN6-43A, ADD NOTES - TO ENSURE COMPATIBILITY WITH D412-742-011/-013 - ESTIMATE (PARTS/PICK LIST) IS AFFECTED	MB	07.08.09
B	UPDATE KIT FOR BOTH SKIDTUBES AND COMPATIBILITY WITH DART CROSSTUBES	CP	02.03.04
A	NEW ISSUE	CP	99.05.03
REV.	DESCRIPTION	BY	DATE
DESIGN		<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN			
CHECKED		DRAWING NO.	REV. C
MFG. APPR.	N/A	D412-666	SHEET 1 OF 1
APPROVED		TITLE	SCALE
DE APPR.		412 GROSS WEIGHT TOWING KIT	1:4
DATE	07.08.10	COPYRIGHT © 1999 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	